

## WHAT IS CLAIMED IS:

- 1                   1.     A process of imparting corrosion resistance to a substrate for  
2     use in a marine environment by coating said substrate with a polyurethaneurea, said  
3     process comprising:  
4                    mixing  
5                    a)     an A-side of a polyurethaneurea coating comprising an  
6     isocyanate-terminated prepolymer prepared by reacting an excess of a diisocyanate  
7     with at least one hydrophobic polyoxyalkylene diol having a molecular weight of  
8     from 400 Da to 4000 Da;  
9                    with  
10                   b)     a B-side containing a diamine and a hydrophobic  
11     polyoxyalkylene diol having a molecular weight determined by its hydroxyl number  
12     of from 200 Da to 4000 Da, in a weight ratio of diamine to hydrophobic  
13     polyoxyalkylene diol of from 1:10 to 10:1;  
14                   to form a curable polyurethaneurea mixture having an NCO/OH ratio  
15     of from 0.85 to 1.15;  
16                   c)     spraying said curable mixture onto said substrate, and curing  
17     said mixture to form a polyurethaneurea coating on said substrate.
- 1                   2.     The process of claim 1, wherein at least one hydrophobic  
2     polyoxyalkylene diol is selected from the group consisting of polytetramethylene  
3     ether glycols and low unsaturation polyoxypropylene diols.
- 1                   3.     The process of claim 1, wherein the ratio of diamine to  
2     hydrophobic polyoxyalkylene diol in said B-side is from 3:1 to 1:3.
- 1                   4.     The process of claim 1, wherein said A-side polyoxyalkylene  
2     diol comprises at least one polytetramethylene ether glycol having a molecular  
3     weight between 500 Da and 1000 Da and a further polyoxyalkylene diol such that  
4     a diol component having a bimodal molecular weight distribution is reacted with  
5     said diisocyanate.

1                    5.     The process of claim 1, wherein said diisocyanate is toluene  
2     diisocyanate.

1                    6.     The process of claim 1, wherein said diamine comprises  
2     diethyltoluene diamine.

1                    7.     The process of claim 1, wherein said A-side and said B-side  
2     have viscosities of 500 cp or less at 160° F.

1                    8.     The process of claim 1, wherein said substrate comprises  
2     brass, bronze, bright metal, zinc, magnesium, aluminum, non-stainless steel, or  
3     stainless steel.

1                    9.     The process of claim 1, wherein said substrate comprises non-  
2     stainless steel, magnesium, or aluminum.

1                    10.    The process of claim 1, wherein said substrate comprises a  
2     fiber-reinforced polymer.

1                    11.    The process of claim 1, wherein said substrate comprises both  
2     a metal and a fiber-reinforced polymer.

1                    12.    The process of claim 1, wherein said substrate is first coated  
2     with a primer coating prior to coating with said polyurethaneurea.

1                    13.    A marine component for mounting on a water vessel,  
2     comprising a substrate coated by the process of claim 1.

1                    14.    The component of claim 13, wherein said component  
2     comprises aluminum, non-stainless steel, or a mixture thereof.

1                    15.    A marine component for mounting on a water vessel,  
2     comprising a substrate coated by the process of claim 2.

1                   16.    A marine component for mounting on a water vessel,  
2   comprising a substrate coated by the process of claim 3.

1                   17.    A marine component for mounting on a water vessel,  
2   comprising a substrate coated by the process of claim 4.

1                   18.    The component of claim 13 which is a radar arch, fishing  
2   platform, bow rail, or rub rail.

1                   19.    The component of claim 13 comprising a substrate comprising  
2   a metal frame and a thin plastic or fiber-reinforced polymer sheet overlying said  
3   frame, and a coating of from 100 to 500 mil of polyurethaneurea applied over said  
4   substrate.

1                   20.    The component of claim 19, wherein said polyurethaneurea  
2   coating is effective to increase the rigidity of the substrate.